News release

On the crest of a wave

4 November 2002

Experts from the Met Office are helping the marine community understand more about huge waves that have struck fear into the hearts of mariners for hundreds of years.

Rogue waves - the term given to ocean waves of exceptional height and steepness - have been the subject of many stories and films. Every year they cause loss of life and substantial damage to ships and offshore structures. About 30% of ship losses occur in rough weather for which they are not designed to withstand. As a consequence, more than 100 ships with cargo, and around 700 lives are lost at sea each year, often resulting in major pollution incidents.

Often regarded as freak events - 'the wave that came out of nowhere' - scientists and oceanographers are now getting closer to determining what causes them. As part of MAXWAVE, an EU research project, the Met Office, in collaboration with five research organisations in Europe, is at the forefront of identifying the sea conditions in which rogue waves develop. Using state-of-the-art computer models that can forecast the ocean wave energy spectrum, along with detailed observations of the sea surface from laser sensors and satellite-borne radar, known rogue wave events can be analysed. If funded, a second phase of the work could also provide probability data for predicting survival sea conditions.

Met Office ocean wave scientist, Jim Gunson said: "From this work we hope to gain a better understanding of the processes by which these waves develop. This research will help in the future design of ships and offshore structures to make them safer, and in the provision of warning criteria to mariners, so they can avoid areas that may have rogue waves."

Notes:
MAXWAVE is featured on the BBC2 Horizon programme Freak Wave on November 14, 9pm.

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